

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) An information processing apparatus characterized by having:
a storage section storing a plurality of operating systems (OSs),
a processor that executes processes which are based on said plurality of OSs, and
process management means that schedules a partition defined as a process of each of said plurality of OSs along a time axis, and executes control for switching said plurality of OSs on the basis of partition switching control along the scheduling, and characterized in that:

said process management means is configured to:

determine whether or not a pre-set partition switching timing exists within a time period from occurrence of an interrupt request to which a maximum allowable delay time is set to said maximum allowable delay time, and

in a case where the pre-set partition switching timing is determined to exist within said maximum allowable delay time, perform process control in which an interrupt processing partition as an interrupt processing period corresponding to an interrupt processing request is set so as to coincide with a the pre-set partition switching timing, and to cause any of said OSs to execute an interrupt process as a process subsequent to an end of a scheduled partition in a partition schedule.

2. (Original) The information processing apparatus according to Claim 1, characterized in that said process management means is configured to execute a process of setting said interrupt processing partition so as to coincide with an earliest partition switching timing that occurs after occurrence of the interrupt request.

3. (Currently Amended) The information processing apparatus according to Claim 1, characterized in that said process management means is configured to perform process control in which a partition being executed is suspended to execute the interrupt process, in a case where ~~the interrupt processing request is a request to which a maximum allowable delay time is set and~~ it is determined that no pre-set partition switching timing ~~does not occur~~ occurs within the said maximum allowable delay time from the occurrence of the interrupt request.

4. (Original) The information processing apparatus according to Claim 1, characterized in that:

said processor that executes the processes which are based on said plurality of OSs is configured to have a plurality of processors capable of operating in parallel, and

said process management means is configured to schedule said partition along the time axis as to each of said plurality of processors to execute partition switching control along a partition schedule as to each of the processors, and to execute a process of selecting one of a plurality of partition schedules corresponding to said plurality of processors, and setting said interrupt processing partition so as to coincide with a partition switching timing in the selected partition schedule.

5. (Original) The information processing apparatus according to Claim 4, characterized in that said process management means is configured to execute a process of selecting one of the plurality of partition schedules in which an earliest partition switching timing occurs after the occurrence of the interrupt request, and setting said interrupt processing partition so as to coincide with the earliest partition switching timing.

6. (Original) The information processing apparatus according to Claim 1, characterized in that said process management means is configured to execute, in a case where the interrupt

request is a request in which a minimum allowable delay time is set, a process of setting said interrupt processing partition so as to coincide with a pre-set partition switching timing that occurs after the minimum allowable delay time passes from the occurrence of the interrupt request.

7. (Original) The information processing apparatus according to Claim 1, characterized in that said process management means is configured to perform, in a case where an interrupt process corresponding to an interrupt processing request is executable in a scheduled partition defined by a pre-set partition schedule, a process of executing the interrupt process in said scheduled partition.

8. (Original) The information processing apparatus according to Claim 1, characterized in that:

said processor that executes the processes which are based on said plurality of OSs is configured to have a plurality of processors capable of operating in parallel, and

said process management means is configured to have a processor-corresponding partition switching module arranged to execute process control corresponding to each of the processors.

9. (Original) The information processing apparatus according to Claim 8, characterized in that said partition switching module is configured to have interrupt group information as interrupt request originating source information which can be accommodated by a processor to which the partition switching module is made to correspond, and to execute a process related to an interrupt request entry stored in a reservation queue corresponding to a group which can be accommodated by a processor to be identified by said interrupt group information, from a

plurality of interrupt group-corresponding reservation queues, one being provided for each interrupt group.

10. (Currently Amended) A process control method for controlling switching of processes which are based on a plurality of operating systems (OSs), characterized by including:

a step of detecting occurrence of an interrupt processing request,

~~an interrupt processing partition setting step of setting an interrupt processing partition as an interrupt processing execution period corresponding to said interrupt processing request so as to coincide with a pre-set partition switching timing, and an interrupt processing request mode determining step of determining whether or not the interrupt processing request is an interrupt processing request to which a maximum allowable delay time is set,~~

a timing determining step of determining whether or not a pre-set partition switching timing exists within said maximum allowable delay time from occurrence of the interrupt processing request to which the maximum allowable delay time is set,

an interrupt processing partition setting step of setting an interrupt processing partition as an interrupt processing execution period corresponding to said interrupt processing request so as to coincide with the pre-set partition switching timing in a case where the pre-set partition switching timing is determined to exist within said maximum allowable delay time, and

an interrupt processing execution step of causing any of said OSs to execute an interrupt process as a process subsequent to an end of a partition scheduled in a partition schedule according to said interrupt processing partition setting information.

11. (Original) The process control method according to Claim 10, characterized in that said interrupt processing partition setting step is characterized by executing a process of setting said

interrupt processing partition so as to coincide with an earliest partition switching timing that occurs after the occurrence of the interrupt request.

12. (Currently Amended) The process control method according to Claim 10, characterized in that said interrupt processing partition setting step suspends a partition being executed and setting the interrupt processing partition at a suspended point, in a case where a the interrupt processing request is determined to be an interrupt processing request to which the maximum allowable delay time is set to the in said interrupt processing request mode determining step and it is determined that no ~~and the pre-set partition switching timing does not occur within the maximum allowable delay time from the occurrence of the interrupt request~~ occurs within said maximum allowable delay time in said timing determining step.

13. (Original) The process control method according to Claim 10, characterized by further including:

a step of scheduling said partition along a time axis as to each of the plurality of processors that execute processes which are based on said plurality of OSs, to execute partition switching control along a partition schedule as to each of the processors, and characterized in that:

said interrupt processing partition setting step selects one of a plurality of partition schedules corresponding to said plurality of processors, and setting the interrupt processing partition so as to coincide with a partition switching timing in the selected partition schedule.

14. (Original) The process control method according to Claim 13, characterized in that said interrupt processing partition setting step executes a process of selecting one of the plurality of partition schedules in which an earliest partition switching timing occurs after the occurrence of

the interrupt request, and setting said interrupt processing partition so as to coincide with the earliest partition switching timing.

15. (Original) The process control method according to Claim 10, characterized in that said interrupt processing partition setting step executes, in a case where the interrupt processing request is a request in which a minimum allowable delay time is set, a process of setting said interrupt processing partition so as to coincide with a pre-set partition switching timing that occurs after the minimum allowable delay time passes from the occurrence of the interrupt processing request.

16. (Original) The process control method according to Claim 10, characterized by further including a step of executing, in a case where an interrupt process corresponding to an interrupt processing request is executable in a scheduled partition defined by a pre-set partition schedule, an interrupt process corresponding to the interrupt processing request in said scheduled partition.

17. (Currently Amended) A computer program that executes process control for controlling switching of processes which are based on a plurality of operating systems (OSs), characterized by including:

a step of detecting occurrence of an interrupt processing request,

an interrupt processing request mode determining step of determining whether or not the interrupt processing request is an interrupt processing request to which a maximum allowable delay time is set,

a timing determining step of determining whether or not a pre-set partition switching timing exists within said maximum allowable delay time from occurrence of the interrupt processing request to which the maximum allowable delay time is set,

an interrupt processing partition setting step of setting an interrupt processing partition as an interrupt processing execution period corresponding to said interrupt processing request so as to coincide with a the pre-set partition switching timing in a case where the pre-set partition switching timing is determined to exist within said maximum allowable delay time, and

an interrupt processing execution step of causing any of the OSs to execute an interrupt process as a process subsequent to an end of a partition scheduled in a partition schedule according to said interrupt processing partition setting information.